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THESIS

A GUIDE TO TRANSITIONS IN
EDUCATION AND TRAINING SYSTEMS

by

J. F. Hickey

June 1980

Thesis Advisor:

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A Guide to Transitions in
Education and Training Systems

by

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Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

ABSTRACT

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TABLE OF CONTENTS

I.	INTRODUCTION -----	7
A.	SIGNIFICANT TRENDS -----	7
B.	IMPLICATIONS FOR THE FUTURE -----	9
C.	PURPOSE OF THE THESIS -----	9
D.	THESIS ORGANIZATION -----	10
II.	THE ORGANIZATIONAL TRANSITION MODEL -----	12
A.	THE FUTURE OR DESIRED STATE -----	13
B.	THE PRESENT STATE -----	15
C.	THE TRANSITION STATE -----	17
D.	TRANSITION MANAGEMENT -----	22
	1. Developing the Activity or Process Plan --	25
	2. Developing the Governance Plan -----	27
	3. Developing the Commitment Plan -----	29
	4. Monitoring and Evaluating the Change Effort -----	30
E.	SUMMARY -----	33
III.	ILLUSTRATION OF THE MODEL -----	35
A.	A TRAINING PROGRAM CHANGE -----	38
	1. Situation Description -----	39
	2. The Future State -----	40
	3. The Present State -----	44
	a. Interview Questions -----	44
	b. Student and Staff Records Screening --	46
	c. Organizational Diagnosis Results -----	46

4. Change Targets -----	51
B. MANAGEMENT OF CHANGE -----	52
1. The Transition State -----	53
2. The Activity/Process Plan -----	58
3. The Governance Plan -----	64
4. The Commitment Plan -----	66
5. Monitoring and Evaluating the Change Effort -----	68
C. SUMMARY -----	70
IV. DISCUSSION AND RECOMMENDATIONS -----	72
A. DISCUSSION -----	72
1. Limitations Imposed on the Model -----	72
2. Future Training System Applications -----	74
B. RECOMMENDATIONS -----	76
1. General Applicability of the Model -----	76
2. Continued Model Development -----	78
FOOTNOTES -----	81
BIBLIOGRAPHY -----	82
INITIAL DISTRIBUTION LIST -----	84

I. INTRODUCTION

As tactical planners, we excel. Hours, weeks and months are dedicated to the development of detailed operational plans and numerous publications have been printed which provide valuable guidance to commanders for the coordinated synthesis of these activities.

This same degree of in-depth planning and coordination has not evidenced itself in those areas of activity which are often referred to as having an "administrative" nature. Many times we assume that goals we wish to accomplish will be realized merely because we direct them to occur. With the ever increasing shortage of suitable personnel and budget constraints, commanders will be required to manage administrative changes with the same elan as tactical operations.

A. SIGNIFICANT TRENDS

In recent years, many social, technical, and budgetary changes have alerted us to the ever evolving nature of the environment in which we live. Examples of demographic changes which will be of great importance to us in the future are:

- A six percent reduction in 16-24 year olds due to the reduced birth rate in the 1960's;
- Movement of women into the services in greater numbers;
- The prime working force age (25-44 age bracket) will increase from 39 million in 1975 to 60.5 million in 1990;

- The 18-24 year old group will decline 21 percent, but black and other minority races will remain stable at 4.5 million from 1980-1990.¹

Social elements of concern are:

- In 1969, 70 percent of our youth accepted authority with few reservations, but now the majority feel no need to take orders from supervisors if they disagree with the order;
- A decline in confidence concerning institutions;
- Only one out of five people state that work is more important than leisure.²

In recent years, all of the services have become increasingly equipment intensive. Manning of equipment will receive as much emphasis as equipping the man. Technological factors which are of concern are:

- The continued rise in development and production of technology based equipment and integrated production systems will increase the demand for trained specialists;
- Tomorrow's soldiers will function in an environment replete with sophisticated and sensitive technological apparatus.

Everyday costs and budgetary constraints have become of greater concern to commanders. Specifically:

- Higher training costs will force the imposition of lower training attrition limits;
- Increasing costs will emphasize the value of rapid training methods;
- Student pay and allowances alone accounted for 39 percent of the fiscal year 1978 training budget;
- The fiscal 1979 DoD budget of training dollars decreased by 2.2 million from the previous fiscal year.³

B. IMPLICATIONS FOR THE FUTURE

It is impossible to dismiss the potential impact of the previously mentioned factors. With a reduction in the numbers of youth available for service, we will have to become less selective in assigning individuals to training programs. In addition, we may have to consider accepting older enlistees because of the projected change in age distribution and work force structure. With minority group members comprising an increasing percentage of the force population, training commands will have to face the problems associated with "language" barriers, educational backgrounds, and social differentiation.

As technology increases, so does the impersonal nature of ones work and scepticism regarding organizations or institutions. Each year our technology base increases and places a greater strain on our training systems to provide competent, trained personnel. If leisure continues to possess greater value for the individual than work, the decrease in student interest will result in increased training costs through slower times-to-completion of training and increased attrition rates. Every academic failure or requirement to retrain an individual increases the cost of training and causes costly bottlenecks in the personnel replacement pipeline.

C. PURPOSE OF THE THESIS

The purpose of this thesis is to provide commanders of

training facilities with a guideline for the development and implementation of change efforts. We can no longer afford the luxury of costly personnel problems and unforeseen structural incongruencies which have impeded change efforts in the past. Commanders must realize that detailed planning for the interim period is every bit as important as the time spent identifying the characteristics of the desired system.

The model which will be presented is in no way intended to provide a rigid system for organizing activities. It is rather intended to provide a method of organizing ones thoughts, energies, and resources in such a way so as to maximize organizational effectiveness and coordinate activities toward previously stated ends. The model is a planning tool and not a means in and of itself.

D. THESIS ORGANIZATION

In order to adequately present the organizational transition model, this thesis has been structured to introduce the material by two means. Initially, Chapter II proposes that training systems evolve through three states during an organizational change. The concepts of a present, transition and future state are covered in detail with key questions and characteristics emphasized to assist commanders in developing a picture of the desired outcome or goal of the change and the starting point or organizational condition from which they are to begin. Heavy emphasis is placed on identifying the

activities which must take place during the interim or transition state to ensure that the end goal or future state is realized. The second portion of Chapter II alerts the commander to the unique aspects of the transition period and provides alternatives or recommendations for the successful management of the training system during this period. The alternatives or recommendations are presented in the form of action plans which are designed to identify or isolate those organizational elements which are critical to the change effort and addresses their management.

To further clarify and illustrate the model, a highly technical training system undergoing change will be described in Chapter III. Emphasis in the first section will be placed on exercising those steps in identifying the key elements of the future state and ascertaining the present status of those elements. The second section of Chapter III will address the identification of specific activities designed to enable a coordinated transition to take place. Additionally, further example action plans will be developed to illustrate the management requirements unique to the transition state. Emphasis will be placed on those techniques outlined in the second section of Chapter II.

Chapter IV briefly discusses the limitation placed on the model and addresses the appropriateness of further applications of the transition model in other areas of complex organizational change outside the realm of training systems.

II. THE ORGANIZATIONAL TRANSITION MODEL

In their book, Organizational Transitions: Managing Complex Change, Beckhard and Harris specify that the change process in a large, complex, institutional system requires consideration of several aspects:

- Diagnosing the present condition;
- Setting goals and defining the new state or condition after the change;
- Defining the transition state between the present and the future;
- Developing strategies and action plans for managing this transition;
- Evaluating the change effort;
- Stabilizing the new condition and establishing a balance between stability and flexibility.

The transition model assumes the existence of three separate and unique states through which the organization passes during periods of change. The basic concept is that all changes must progress from the present state, through the transition state to the future state. The future state is a description of the way one wants things to be. As an example, it may be the desired organizational structure, processes or characteristics of the output. The present state is how things actually are within the organization. Characteristics which will have an effect on the desired ends or future state are identified and noted for future action.

The transition state is that period between the present and future states. It is of particular concern to the commander because of its direct effect on the attainment of objectives specified for the future. Because of its critical nature and unique characteristics, detailed planning must take place which will provide a smooth transition from the present to the future state. It is not enough to identify intermediate structures or processes. The commander must also ascertain which individuals and groups are necessary to the change and what activities are necessary to attain their commitment. He must also determine how this interim organization can best be managed to enhance the possibility of achieving the desired goals.

In this chapter the author will concentrate on identifying the present, future and transition states and outlining the components for the management of the transition state. In order for a change effort to be successful, senior commanders must recognize the need for change and have a clear picture of the desired outcome or end state. To manage movement to the end state, the commander must also be sure of the point from which he is beginning.

A. THE FUTURE OR DESIRED STATE

The future state scenario is an accurate description of the commanders desired outcome after the change has been completed. When specifying the concept or picture of the

desired state, it is imperative that as detailed a description as possible be developed. The following is a list of questions which may assist commanders in identifying the elements of the future state.

- What is the expected organizational structure?
- What is the expected reward system?
- What are the expected managerial styles or roles?
- What will be the expected personnel policies?
- What will be the performance review system?
- What will be the performance requirements?
- What is the expected output?
- What are the expected characteristics of the output?
- What are the expected costs?

Emphasis should be placed on developing the desired state in the absence of present constraints or procedures. Many times when planning for changes to present processes or outputs we begin the planning activity from the point of resources we presently have. These constraints, whether they be in the form of human, physical or financial resources force us to plan and progress at an incremental pace at best. How many times have we heard individuals say that a particular innovation will not be possible because: certain people would not support it; we don't have the money; or because we do not have the necessary equipment or personnel? Rather than plan what we can do with what we have, we should identify

what we need to support that which we plan to do. We need to ask: what actions must be taken to gain needed approval; how we can generate additional funds; and where we can obtain the necessary additional equipment and personnel? Any other activity will only serve to stifle imaginative and detailed planning.

B. THE PRESENT STATE

The "present system scenario" is an actual description of the command at the present time. Extreme care must be used in estimating or diagnosing the present system for it is the beginning point of the transition to the desired system. Several methods are available to assist the commander in ascertaining the present state of his organization. The following is a list of those methods which provide the most in-depth analysis.

- Interviews
- Questionnaires
- Historical Data
- Organizational Charts
- Informal Substructures
- Policy Directives

After completion of the data collection activities, one can develop a more accurate description of the characteristics of the present state. Two remaining areas to be addressed in the present system are:

- What behaviors, policies, etc., existing in the present system must be changed in order for the change to be effective?
- What is the readiness for change within those areas identified as necessary to the success of the change?

By identifying the future state and the related elements of the present state, we can now attempt to identify those processes which need to be modified to effect a change toward future goals. The processes which need to be examined include:

- Changes in attitudes required;
- Changes of practices required;
- Changes of policy required;
- Changes of rewards required.

Though the elements may not be attitudinal in nature, all activities, policies, and rewards are accompanied by attitudes held by participants in the system.

Even with all of our plans and research, change will not come about until the organization is ready. One way of looking at attitudes and motivation toward implementing change is to think in terms of change readiness. David Gleicher has developed a simple formula for determining this state:

$$C = ABD$$

where C = change, A = level of dissatisfaction with the status quo, B = clear desired state, and D = practical first steps

toward the desired state. In other words, there has to be enough dissatisfaction with the current state of affairs (A) for someone to be mobilized for the change. The various subsystems need to have clear enough goals (B) and there needs to be some awareness of practical first steps (D) to move, if movement is to take place.¹

C. THE TRANSITION STATE

Because organizational change takes place over a period of time, the transition period is that time between the present state and the culmination of the change effort or attainment of the future state. Too many times we fail to recognize the unique nature of this period and the requirements for its successful management. The commander must devise a strategy for coping with the confusion of roles, decision making, and authority which will occur during the transition period. The important issues to be considered in designing such a strategy include:

- Determination of what needs changing;
- Determination of which groups and individuals are necessary to the change and their roles;
- Determination of where to intervene;
- Choice of intervention technologies.²

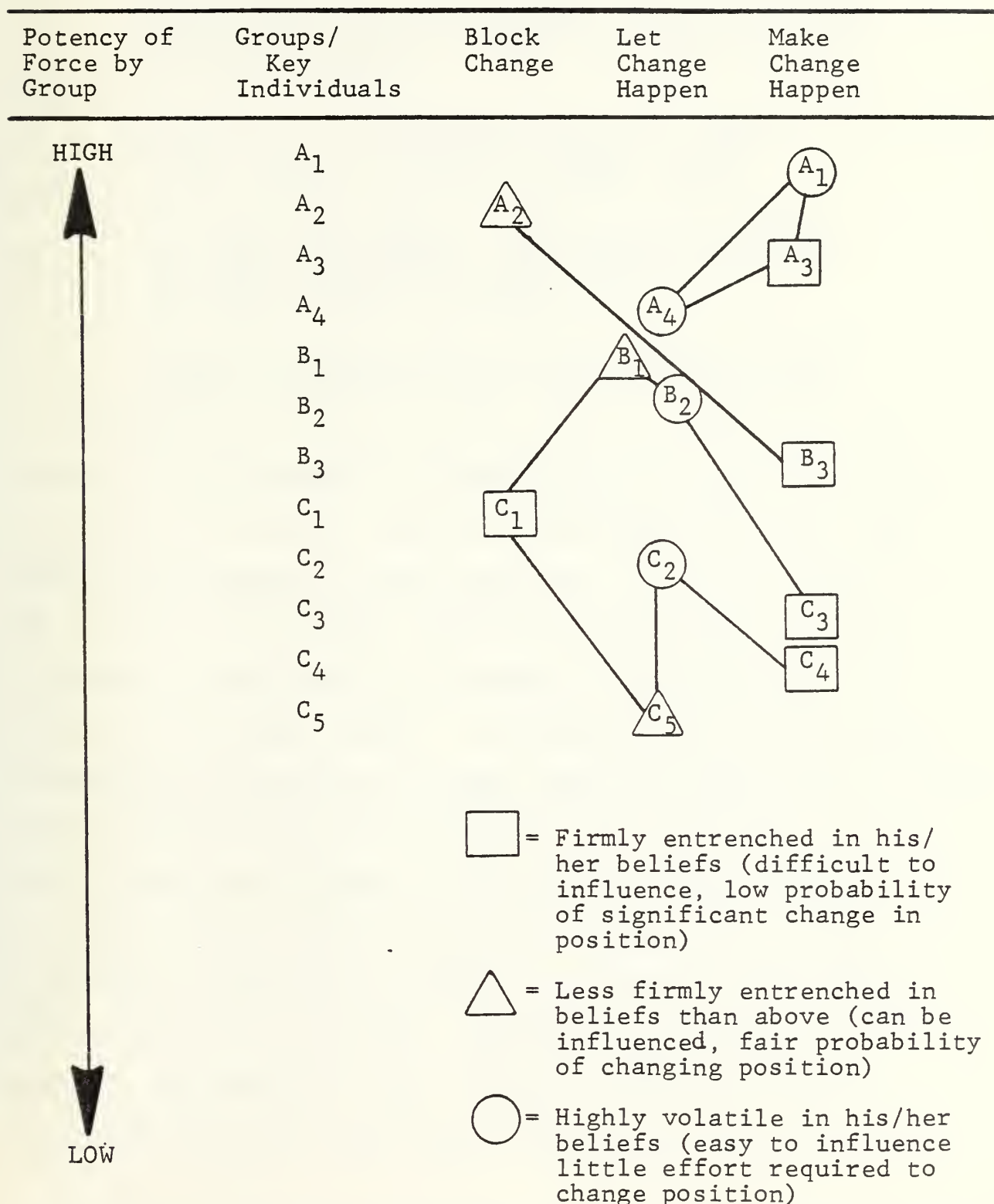
By identifying the elements of the present state which relate to the future state, those modules which will undergo change have been identified. The next step is to find ways

of increasing the organization's readiness and capability for the change. Some of the considerations are as follows:

- If traditions, norms, and ways of work are locked in, the intervention will have to break people away from deeply held attitudes or behaviors to ready them to try something else. Some "unfreezing" intervention is indicated.
- If the priorities or the goals of the organization are unclear or are not shared, a goal-setting exercise or process may be required.
- Structures probably need changing if the organization chart does not reflect the tasks to be done.
- There may be a need for setting up some temporary systems and projects in order to get the change instituted if present structures are unable to do it.
- If new information or technical knowledge or skills are required to achieve the change conditions, some educational activities may be needed.³

Once the commander has determined what elements are to undergo change and what aspects are to be addressed he must consider which groups and individuals are necessary for the success of change and their particular roles. It may become necessary to expend considerable effort in identifying both the official and informal leaders of groups within the organization who are critical to the change effort's success. Figure 2.1 will assist in identifying the forces involved in the change and provides a graphic representation of their relationships.⁴

FIGURE 2.1
SOCIO-POLITICAL FORCE ANALYSIS



The steps involved in developing the socio-political force analysis form are:

- Beginning with the group which has the greatest effect upon the change effort, list all of the significant groups and their key (official and informal) members;
- Designate in the appropriate column whether they intend to block the change, let the change happen or make the change happen;
- Ascertain the degree to which the individuals are firmly entrenched, less firmly entrenched, or highly volatile in their positions and attitudes toward the change.
- Draw connecting lines between individuals where formal or informal social relationships exist.

An analysis of Figure 2.1 will serve to illustrate the utility of the concept. In observing, A_2 has been identified as blocking the change, possessing high power and force and somewhat approachable in his position. If A_2 is critical to the success of the change, the best approach may be to have B_3 attempt to influence A_2 in moving to a posture where he would let the change happen. In considering C_1 , he is firmly entrenched in blocking the change, but has a lower power base and may not be critical to the change in and of himself. Caution must be exercised, however, because of C_1 's relationship with B_1 and C_5 . If C_1 were to informally influence B_1 to move to a position of blocking the change the success of the change effort could be in jeopardy. Hopefully C_3 through B_2 could maintain the position of B_1 . Though A_1 and A_4 are high in power and volatility their relationship with A_3 and lack of

connection with A_2 should ensure their maintaining their present position. Should the relationship lines break down, however, their position could easily be effected.

Having devised a strategy based on an analysis of the forces effecting the implementation of the change and what needs changing, the commander is now faced the the choice of where to start. Some of the subsystems of every organization that can be examined as alternative starting places are:

- The top management or top of the system;
- Management-ready systems - those groups or organizations known to be ready for the change;
- "Hurting" systems - a special class of ready systems in which conditions have created accute discomfort in a previously unready system;
- New teams or systems - systems without a history and whose tasks require a departure from old ways of operating;
- Staffs - subsystems that will be required to assist in the implementation of later interventions;
- Temporary project systems - those systems whose existence and tenure are problem defined and whose task is to achieve a specific goal.⁵

The choice of intervention technologies was addressed initially in identifying the areas or elements in need of change. To remove the possible misunderstanding generated by the term "intervention," it's meaning should be understood. In the broadest sense of the term, an intervention is any

activity, procedure or process in which selected organizational units (target groups or individuals) are engaged in a task or sequence of tasks where the task goals are related directly or indirectly to organizational improvement. Because of the magnitude of the subject and it's situation specific nature, the selection of intervention activities will not be addressed at length in this thesis. Examples of intervention activities specific to a particular situation will be provided in Chapter III. It should be understood at this point that the choice of intervention techniques should be one of the later areas of selection by commanders. Often we decide what should be done prior to knowing what we are trying to achieve by the activity.

D. TRANSITION MANAGEMENT

In the previous section we briefly discussed the three states of the organizational transition model. In this section we will highlight the problems unique to the transition state and outline a coordinated approach for its management.

As previously implied, the transition state is unlike the present or the future. It is a unique condition with a specific time duration and characterized by certain organizational dynamics. Several of the organizational characteristics of the transition state are:

- High uncertainty and low stability throughout the organization;
- High levels of inconsistency;

- High emotional stress on people;
- High energy (often undirected);
- Control becomes a major issue;
- Past patterns of behavior become explicitly valued;
- Conflict increases, especially intergroup.⁶

Changing role expectations, responsibilities and reward systems foster feelings of uncertainty and low stability. If the older, better known behavior patterns become inappropriate in the new environment, new norms and assumptions must be examined and tested. Should communications and information systems not provide suitable channels for performance feedback, past patterns of behavior will become explicitly valued. This regressive behavior will provide a temporary sense of stability for many people but will increase the potential for intergroup conflict.

Control becomes a major issue in the transition period. Enormous amounts of energy, especially negative energy (e.g., frustration, anxiety, threat, etc.), needs to be redirected and managed. During this period key leaders become very visible and important role models. Initially proactive and guidance giving leadership are needed. However, as the transition progresses, conflict management becomes a priority management activity. Though change will not come about without conflict, conflict must not be allowed to endanger the success of the change.

Emotional stress and uncertainty can be further reduced by developing strategies which foster a sense of trust and respect toward the change management. Strategies need to be perceived as consistent with goals and confidence in the change plan is essential.

Essential to the effective management of the transition period is:

- Psychological acceptance of uncertainty on the part of key leaders;
- Clear and explicitly defined goals for the whole organization;
- Identification of intermediate goals, milestones or check-points;
- Development and management of a two-way communications system adequate to handle high informational flow demands;
- Detailed plans specifying:
 - a. change strategy
 - b. commitment building process
 - c. management structures
 - d. evaluation/feedback on progress
- Commitment and confidence of key leaders to the change.

The remainder of this chapter is provided to assist commanders in coordinating and developing the previously mentioned management essentials for the transition period. The tools for this activity are the activity/process plan, governance plan, commitment plan and monitoring/evaluation plan. The

activity/process plan provides the commander with helpful guidelines for developing and coordinating the activities necessary to provide an efficient and orderly transition from the present to the future state. Realizing that the transition state is a unique period which may require an alternate management structure, the governance plan assists in identifying that structure which best facilitates the developing of the new system. The commitment plan assists the commander in identifying the individuals and groups critical to a successful change effort and provides guidelines for developing activities to improve organizational commitment. Finally, the evaluation plan provides a vehicle for evaluating the organizations progress toward its future goals and the success or failure of the activities designed to facilitate their attainment.

1. Developing the Activity or Process Plan

Once the desired change objectives have been clarified and the present state of affairs made clear, an explicit plan specifying activities to be undertaken and critical incidents or events that must occur to get from here to there must be made. In essence, the process plan is the roadmap for the change effort. An effective process plan has the following characteristics:

- It is purposeful - the activities are clearly linked to the change goals and priorities;

- It is task-specific - the types of activities involved are clearly identified rather than broadly generalized;
- It is intergrated - the discrete activities are linked;
- It is temporal - it is time-sequenced;
- It is adaptable - there are contingency plans and ways of adapting to unexpected forces;
- It is agreed to by the top of the organization;
- It is cost effective in terms of the investment of both time and people.⁷

To develop the activity/process plan, the commander must initially identify the sequence of critical events or milestones which must be achieved by elements of the organization. In order to reach these critical events, it may become necessary to design activities which prepare the organization for the impending critical event. For example, if the critical event were the establishment of new performance criteria, prior activities may be necessary to prepare members of the organization for the change. Such activities may be in the form of workshops designed to modify attitudes toward the present system and seminars for developing performance evaluation criteria. Overall, the critical events and their task specific activities comprise the activity/process plan.

A suitable analogy to the development of an activity/process plan is the generation of a plan to attack an enemy

position. The present state can be understood as ones present position and state of readiness for the attack. The future state can be described as the defeat of the enemy and consolidation of the objective. In this case, critical events would correspond to the securing of intermediate objectives enroute to the final objective (future state). Each intermediate objective requires preparing the organization for the ensuing assault and supporting arms are coordinated to complement the method of attack. In this manner, these activities serve the purpose of making it possible to reach the next critical event (intermediate objective).

2. Developing the Governance Plan

The governance plan specifies how the transition state will be managed. In developing a specific plan, the commander recognizes the unique needs of this period. It may very likely become evident that the present command structure is not well suited for the management of the transition period. Though identification of the most suitable management structure is difficult, the chance of success is greatly increased if the commander addresses the following question: "What is the most appropriate management system and structure for effectively managing this ambiguous transition state of affairs so that it creates the least tension with the ongoing system and the most opportunity to facilitate and develop the new system?"

Several possible transition management structures and their unique traits are provided below:

- The commander becomes the project officer. In this situation the commander becomes responsible for coordinating the change effort. If this requires the majority of his time, he may consider transferring day-to-day operations of the present to his staff.
- A project manager. The commander may give either a staff or line officer the temporary job of project manager. Here the project manager functions as the coordinator for the project with all of the powers of the senior commander.
- The hierarchy. Management of the change is given to subordinate commanders as an additional task. Responsibility for the change effort now competes for priority with the individuals regular duties.
- Representatives of constituencies. This management structure is comprised of representatives from the major constituencies involved in the change. An example would be the selection of a group comprised of the leaders of subordinate groups or from organizations required to support the change.
- "Natural" leaders. Certain individuals in most organizations can bring a group of followers with them. Therefore, it may become necessary to select a manager or group of managers who bring a large or critical constituency in line with the change effort.
- A diagonal slice through the command. Unlike getting formal representatives from groups, a diagonal slice provides a representative sample when input from many different levels and functional areas of the organization are needed.

- The "kitchen cabinet." This method is best utilized when the commander desires to control the change but doubts the objectivity of his subordinate commanders in providing their input. The cabinet is often made up of those trusted advisors of the commander.⁸

3. Developing the Commitment Plan

In an earlier section, we addressed the concept of determining which groups and individuals are necessary for change to occur. With the information acquired through developing the socio-political force analysis, we can now prepare the commitment plan. Commitment cannot be ordered. Therefore, by developing activities designed to bring the critical mass (those people/groups, who if actively in support of change, ensure change will take place) on line we are increasing the probability of a successful change effort.

Various alternatives are available to help obtain the commitment of target individuals and groups:

- Problem finding activities. When groups or individuals are unaware that a problem exists, problem identification and clarification activities often help.
- Education activities. Like problem finding activities, education activities also serve to increase awareness and commitment where policy statements or directives have failed.
- Changing the rewards. Rewards should be associated with the new, desired behavior.
- Functioning as a role model. Often times the commander must concentrate on personifying the new system he wants to perpetuate.
- Forced collaboration. Dissenting individuals may be required to work on perceived

undesirable projects in order to obtain commitment. In this way they will be directly rewarded for contributions and disciplined for negative behavior.⁹

- Beneficial counter-commitment activities. If there are individuals within the organization who are for the proposed innovation but have a reputation for backing unsuccessful endeavors it may be wise to alienate their allegiance to the change effort. Having such individuals opposed to the change effort may bolster the perceived possibility of its success. If history has shown their judgement to be faulty, then their opposition may have a positive effect on the organizations attitude toward the change effort.

4. Monitoring and Evaluating the Change Effort

In order to enhance the probability of achieving the smoothest possible transition to the desired state, a well thought out monitoring and evaluation plan should be developed. Many times our evaluation of progress is judged by merely asking the question, "how are we doing?". Such an approach is unlikely to provide critical information.

In developing the evaluation plan one must initially establish the purpose of the evaluation. By establishing the purpose of the evaluation the commander is isolating those aspects of the change effort which are of greatest concern to him. The purpose may be identified as the conduct of a total-system performance review, monitoring the effects of specific interventions, or directing organization energies toward a particular goal. If it has been identified that specific intervention activities are essential to the

achievement of critical events, then some means of evaluating the effects of these activities is necessary.

Areas of concern in a total system performance review may be:

- The extent to which desired conditions have been achieved;
- Areas requiring further change;
- Consequences which have resulted from the change;
- Current attitudes toward organizational conditions;
- Ability of organization to accomplish its mission.

Evaluation plans also serve to concentrate organizational energy in specific areas. An evaluation may be considered an intervention in and of itself. By virtue of investigating the movement toward a specific goal, the commander is ensuring that energy is being expended in its achievement.

The next step in the development of the evaluation plan is to identify the sources of data and targets of the evaluation. Some questions which should be addressed are:

- What organizational variables are of greatest concern?
 - a. Attitudes concerning goals, morales, etc.
 - b. Organizational communications, conflict, management, decision making, problem solving, etc.

- c. Organizational outcomes - drop-out rate, failure rate, absenteeism, academic achievement, costs, etc.
 - d. Organizational structure, reward system, clarity of roles, reporting relationships, etc.
- Who in the organization possessed the required information? Information sources should be chosen on the basis of their ability to provide the most timely, valid and relevant data.
 - Who will use the information produced? The data collected should be tailored to the user's needs and capabilities. Poor identification of the user's needs may result in the over accumulation of data which may only confuse the issues.
 - Is there a data feedback activity planned? Information received as input should, if possible, be fed-back to those who provided the data. If such an activity is impractical or impossible, an explanation should be provided.

The final step in the development of the evaluation plan is the selection of methods of data collection. Numerous data collection methods are available, e.g., interviews, historical data (reports), questionnaires, observations of meetings and work activities, personnel records and organizational activities. In selecting the appropriate data collection method, the commander must consider time and resource constraints. If, for example, an evaluation of an intervention activity is needed prior to the continuation of activities, the need for rapid reporting may make an elaborate, time consuming, data gathering effort inappropriate. Timing is also a concern. The commander needs to identify when the

data will be collected and when reviewed. The desired information on the status of an intervention or the entire change effort is not optimally available at all times. The purpose of the evaluation will guide the commander in identifying the optimal data collection time and the best time to review the data.

E. SUMMARY

This chapter was developed to provide commanders with a detailed model for coordinating the planning and implementation of complex organizational change efforts. The Organizational Transition Model, with its unique three state concept, was the basis of the proposed model. The first section of the chapter sought to develop a detailed description of the future state scenario. Particular emphasis was given to the development of the scenario in the absence of present constraints or procedures.

Next, we concentrated on developing the present state scenario. Several methods for data collection were outlined and the concept of change readiness was introduced. By identifying the future state and the related elements of the present state we were able to identify those processes which needed to be modified to effect a change toward future goals.

In the final sections of the chapter we introduced the

concept of the transition state and the elements critical to its successful management. The transition state was identified as that period between the present and future states. Unique in character and critical to the successful accomplishment of future goals, several planning tools were outlined for coordinating and managing the transition period. The activity/process plan provided an explicit plan specifying activities and events to be accomplished to progress from the present to the future state. Because of the transition states unique nature, the concept of a governance plan was introduced. Finally, the commitment plan and evaluation plan were outlined to provide guidance in developing organizational commitment to the change and evaluating the designated activities and organizational progress toward specific future goals.

To further clarify and illustrate the model, a highly technical training system undergoing change will be described in Chapter III. It should be understood that all activities and examples described are situation specific and are in no way applicable in all cases.

III. ILLUSTRATION OF THE MODEL

Prior to developing the scenario for exercising the model introduced in the previous chapter, it is necessary to describe the changes and conditions which have led up to the need for restructuring our present training systems. With the passing of the "Baby Boom", so has the plentiful supply of quality enlistees. By 1985 the Armed Services will have to recruit one out of every three 17 and 18 year olds.¹ Coupled with the increasing technical nature of our weapon systems, these reductions in qualified personnel will require a continuous review of our instructional methods and systems. In many cases we may find it necessary to develop systems which exhibit maximum flexibility and are keenly attuned to the needs of the trainee.

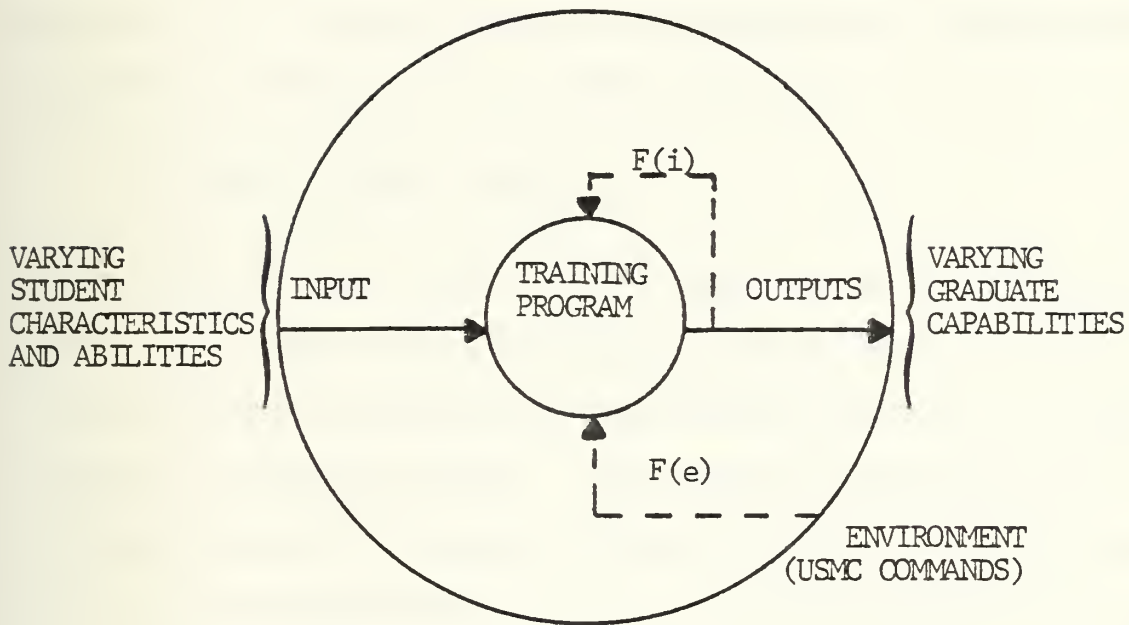
Our training systems must also be keyed to the needs of the instructor corps as well as the students. In our technical training programs we depend upon highly trained personnel to instruct and develop the entry level and advanced level student. At present, we are experiencing difficulty in retaining this pool of highly skilled technicians. Private industry has been successful in luring away increasing numbers of these individuals through financial enticements. We must find ways of making their work more intrinsically rewarding for we can not hope to fight the battle of their retention

on financial grounds alone. Feel assured that private industry could win the financial battle. We, unlike the opposition, do not have the ability to raise the bidding and automatically pass on the increased costs to the consumer.

A simple systems model helps to further illustrate the need for designing flexibility into our training programs. Figure 3.1 serves to depict the critical relationship that exists between the input to the training system, the training program, the output of students from the program and the commands or environment to which the students are assigned. As illustrated, the input to the system consists of entry level students who possess varying characteristics and degrees of ability. Further, this input is processed by the training program and becomes the system output (graduates). $F(i)$ is an internal feedback mechanism that allows the training system to detect changes in the output. In this way the training system can change its methods to compensate for increasing attrition rates and slow student progress and structure the material covered to meet student and organizational needs. Should the interval feedback system fail to detect inadequacies in the system's output, the environment (USMC commands to which graduates are assigned) have the capabilities of providing their own feedback $F(e)$ to the system.

FIGURE 3.1

Training System



With a fixed or rigid training program, a continuous flow of suitable student output assumes a stable, continuous flow of inputs. Realizing that this is a situation which we can no longer assume to exist, the only alternative available is to change the training program to compensate for the changes in input. If the input remains constant and financial constraints change the training program will again be effected.

With the increasing probability of change in our training systems, the need for a sound transition plan becomes of even more importance. The first section of this chapter is devoted to the development of an organizational scenario and seeks to exercise those steps in identifying the key elements of the future state and ascertaining the present status of those elements. The second section will develop the planning and management elements of the transition state.

A. A TRAINING PROGRAM CHANGE

In order to best exercise the organizational transition model, the sample training program considered will be that of a major change in instructional delivery methods in a highly technical training program. The sample organization will be a communications-electronics program which is to transition from an instructor-based, platform delivery method of instruction to that of a computer-based, instructor facilitated method. The primary reason for the change is associated with the increased cost of training via the lock-step method and the changing educational needs of the student input to the system. It has been determined that computer assisted instruction offers a degree of flexibility, in terms of curriculum adjustment and meeting student learning needs, that can not be efficiently maintained by platform instruction techniques.

The sole purpose of developing the scenario is to provide a vehicle for further demonstrating and explaining the model. The reader should make every attempt to avoid judging the value of the organizational transition model based on the expertise or knowledge of the technical intricacies unique to computer assisted instruction exhibited during this analysis. This portion of the thesis is in no way an attempt to explain or persuade the reader as to the advantages or disadvantages of such a system. For this reason, the elements of hardware selection, software development and courseware design have been purposefully avoided. This choice also serves to demonstrate the universal applicability of the model and minimize the need for extensive technical knowledge on the part of commanders in order to plan for and manage successful program changes.

1. Situation Description

Colonel Smith's assignment required that he manage the implementation of a new training program designed to reduce the cost of training communications and electronics personnel. Recent studies had indicated that platform instruction was becoming increasingly expensive and minimally responsive to the changing needs of student input to the system. It had also been demonstrated that computer based instruction is more flexible, less costly and more responsive to student needs.

The actual contracting for hardware, software and the development of instructional frames had been addressed by Colonel Smith's predecessor. On taking command, Colonel Smith was informed that the initial delivery of computer hardware would begin in June, 1980 and the first class to undergo computer based instruction would commence in April, 1981. Much to his disappointment, he discovered that no one had yet addressed the total concept of the system change. Previous efforts had been devoted to identification of the hardware requirements necessary to provide instruction to forty students at a time in two separate classrooms, and the development of the courseware and software necessary to ensure optimal computer-student interaction.

2. The Future State

In developing his scenario of the future state of the organization, Colonel Smith addressed many of the questions suggested in Chapter II. Of primary concern was the expected costs in developing and maintaining the future organization. To help achieve a 30 percent reduction in training costs, he noted that in utilizing his computer assets for record keeping purposes he could cut administrative costs by reducing the number of necessary administrative personnel. Although it was a significant reduction in personnel, Colonel Smith desired to maintain his existing organizational structure to facilitate the flow of information.

Despite the economic and student input constraints, the expected output from the program was a well trained, technically proficient, physically fit individual with a positive attitude toward his/her ability to meet the challenges of future assignments. In order for the student to develop to this point, he/she must demonstrate the following characteristics.

- An efficient style of learning;
- An internally controlled motivation;
- Desire to master objectives rather than passing tests;
- Shares knowledge of subject matter with other students;
- Does not construe anything in self-paced, personalized instruction that is incompatible with being a highly disciplined Marine.

In addition, each student would achieve a 100 percent success rate in completing the course learning objectives. Time to completion for the basic course material would be reduced from eleven class days to an average of eight class days per student. This would result in an overall 30 percent reduction in training costs per student and an eight percent reduction in student attrition.

It became increasingly evident that the instructor played a most critical role in developing the student's potential. Instructors would need to evidence the desire and ability to perform:

- Diagnosis of learning difficulties;
- Encouraging and supportive of students having difficulties;
- Devote time and effort to ensure that all students will learn;
- Command of instructional strategies: lecture, discussions and individualized instruction;
- A subject matter expert;
- Motivator, task setter;
- Believe that all students can learn;
- Accountable for student attrition;
- Student confidant and counselor.

Under the new program, instructors would be evaluated on the basis of several criteria to include student attrition and time to course completion. Because he wished to emphasize reductions in attrition and cost savings through reduced times to course completion, Colonel Smith developed Figure 3.2 as a guide to instructor evaluation.

FIGURE 3.2
Evaluation Guide

Student Attrition Rate	Average Time To Course Completion	Evaluation
20%	11 Days	Below Average
15%	10 Days	Average
10%	8 Days	Above Average
5%	7.5 Days	Excellent
2%	7 Days	Outstanding

He intended for the chart to provide a guide for evaluating performance in these two areas. Colonel Smith realized that only on rare occasions would an individual receive the same evaluation for each area of concern. Therefore, the evaluations from Figure 3.2 would only serve as input to the development of a more detailed instructor evaluation system.

The future reward system was designed to emphasize those traits and results which would contribute to Colonel Smith's overall goals. He wished to foster a desire to complete the course material as quickly as possible and a spirit of cooperation between students. To accomplish this, those students who completed the course material in 7.5 days or less and received student assistance evaluations from his/her peers in the upper 25th percentile would be awarded a letter of commendation from Colonel Smith. Along the same vein, quarterly and annual awards for instructor excellence would be awarded to those instructors who maintained a five percent or better student attrition rate and an average of eight days or less for time to course completion.

Colonel Smith also believed that the future state would be characterized by an organization with decentralized control and responsibility. Given the requirements set down by higher headquarters, the academic departments and instructors would be able to exercise maximum flexibility in selecting

suitable instructional procedures for students and updating of the instructional base.

3. The Present State

After his description of the future state of the organization Colonel Smith sought to develop an accurate description of the present system. In developing his scenario of the present system he reviewed data from group interviews with headquarters personnel, instructors, and students. He also utilized historical data in the form of:

- Student service records;
- Student academic records;
- Student class rosters;
- Instructor assignment rosters;
- Student attrition reports.

Other methods utilized to offer insight into the situation were the analysis of organizational directives and the identification of informal subgroups within the organization.

a. Interview Questions

The interview questions were subdivided into two categories. The first category or section contained questions seeking cross-sectional organizational data. All interviewees were asked to respond to these questions regardless of subgroup membership. The second category or section was subgroup specific. Each individual was asked to respond to particular questions unique to their sub-unit.

Examples of the cross-sectional questions are:

- What is your opinion of the quality of the student assigned to the school?
- Do you believe there is a need to change the method of instructing communications and electronics students?
- What degree of success do you believe the computer based education system will enjoy?
- To what degree do you believe that the computer assets will effect the performance of your duties?

Examples of those questions which provided data specific to a particular subgroup are:

1. Headquarters subgroup:

- How do you feel the reduction of administrative personnel due to the increase in computer capabilities will effect your section effectiveness?
- To what extent do you feel responsible for the implementation of the new program?
- What organizational structure is best suited to managing the future organization?

2. Instructors:

- What are the characteristics of an instructor under the present system?
- How much time do you spend individually with each student?
- Do you believe the present performance evaluation system adequately reflects your abilities as an instructor?

3. Students:

- To what extent do you feel that you were adequately prepared for your training course?

- Do you believe that the instructors were attuned to your needs as a student?
- How cooperative were your fellow students in sharing their knowledge of the course matter with you?

b. Student and Staff Records Screening

By screening student and instructor records, Colonel Smith hoped to discover trends in his present student input and instructor performance. Student records revealed:

- Entry level abilities of students to include intelligence, technical, verbal, reading and mathematics scores;
- Academic performance scores;
- Demographic data;
- Instructor assignments.

By correlating within student items and student record items with the instructor assignment records Colonel Smith hoped to discover correlations between:

Student abilities and performance;
 Demographic data and student performance;
 Instructors and student performance;
 Students achievement and instructor performance evaluations.

To assist in evaluating item number four, each curricula officer was required to prepare a brief evaluation of the instructors subordinate to them.

c. Organizational Diagnosis Results

After completion of the organizational research activities Colonel Smith prepared a detailed narrative of the

present state of his education program. His own research of school directives indicated that the present reward system was based on a student's individual achievement as evidenced by a final grade or average for a given course. Those students who completed the course material with a final average in the top ten percent of the graduating class received a letter of commendation from the school director which was noted in their service record book. Evidence of a formal instructor reward system was nonexistent. Interviews with curricula officers indicated that an informal reward system for instructors did exist whereby noteworthy instructors were given extra time off and occasional rotation to less demanding duties as a form of meritorious R and R.

In general, the interview responses across the organization indicated that there was no felt need for a change in instructional technology. The primary reason for the lack of success demonstrated by the increasing student attrition rate was due to the faulty student selection process utilized by higher headquarters. Many felt that the students were not well enough equipped intellectually to complete the course. For that reason most individuals felt that the new program would be minimally successful at best.

Student interviews revealed that the present system fostered the concept of externally controlled motivation. Success was understood in terms of recognition received from others and awards received. The competition for grades and

rewards had fostered an attitude resistant to the sharing of knowledge. Many students felt that they were ill-equipped to enter the training program. Student records further indicated that 35 percent of the entry level students possessed mathematics and reading scores below the minimum requirements. Seventy-three percent of the students that had to eventually leave the training program (attrition) were found to be members of the lower 35 percent group previously mentioned.

Being a very outspoken group, much data was collected from the interviews and research on the instructors. The majority expressed a desire to maintain the present system because they were most familiar with it and it had been successful in developing them in the years past. They readily identified the present attrition problem and increased costs of instruction as having their roots in the poor quality recruits enlisted. They believed that the recruiters would take anyone who could "sign his/her name and breathe".

At that time, their daily activities consisted of conducting up to four hours of platform instruction per day. The lesson plans were previously developed and very little evaluation and updating of instruction was conducted. During the class period the instructor had little latitude in the style of presentation and proceeded at a pace dictated by the class time schedule and lesson manuscript. The quality of instruction tended to be evaluated on the basis of platform

technique and instructor knowledge of the subject. Because of the implied evaluation process and the perceived poor quality of students, the instructors felt that they should not be evaluated on the basis of student success.

Not surprisingly, they were not very knowledgeable in the details of transitioning to computer based instruction. It was their feeling that the program would fail because of their belief that the instructors would become pawns to the computer. They had no understanding of the multi-media educational concept and the function of the instructor as diagnostician and facilitator.

By analyzing the student-instructor correlation data, Colonel Smith was able to conclude that there was no significant correlation between student achievement and instructor performance evaluations. Further, on receiving the curricula officer input on the instructors, student performance did not evidence itself as an aspect of performance criteria. It was not uncommon for the same individual to evaluate several instructors under several different criteria. One instructor was given an excellent evaluation because of his excellent physical fitness and exemplary personal appearance. At the same time another instructor received a like evaluation based on his platform manner and forcefulness.

The headquarters and support elements evidenced a desire to maintain the status quo. Most of the primary

staff officers had been successful in developing their own power base within the organization. Increases in personal staff had served to insulate them from the problems of the organization. They expressed little ownership in the new program and were apprehensive about the reduction in administrative personnel and increase in computer assets. It was their feeling that computers were erratic to the point of requiring duplicate manual records during an abnormally lengthy trouble shooting period.

Of immense value to Colonel Smith was the identification of the various formal and informal groups during the research period. Colonel Smith realized that his organization did not exist in and of itself. He was a tenant command of the base and was not operationally subordinate to the Base CO. However, Colonel Smith did have to provide personnel to support several functional activities on the base, such as guard personnel. From this point, the Base CO did effect the functioning of his programs and was considered as a viable group. The instructors were divided into the majority who were against the change, and a smaller group who shared the desire for the change and had a few powerful members. The headquarters and support group were close to unanimous in their slightly negative view but could not be viewed as a significant threat to the change. The largest and most critical group to the successful evolution of the change effort was clearly the instructor element.

4. Change Targets

After identifying the future state and the related elements of the present state, Colonel Smith identified those processes which needed to be modified to effect a change toward the future goals. He was primarily concerned with changes in attitudes, practices, policies and rewards.

Of initial concern was the generalized attitude of satisfaction with the status quo and lack of faith in the proposed system. Colonel Smith quickly identified the need for creating a sense of discontent with the present system in order for the members of the command to desire a change to the new system. He knew that he had developed a clear desired state and had offered practical first steps toward attaining that state but he also realized the need to unfreeze present behavior before introducing the change. Further, the lack of knowledge of the proposed system had to be overcome and a viable first step developed. The attitudes surrounding student selection, poor recruiting, instructors becoming pawns to the computer, and the lack of faith in computer assets demonstrated by the headquarters and support elements were also of concern.

Several practices were identified as being contrary to the future state scenario. The faulty and at times nonexistent criteria for instructor evaluation had to be restructured. The practice of assigning ill-prepared students to courses of

instruction prior to their undergoing remedial training had to be discontinued and a remedial training program developed. This was the first step toward a movement away from the practice of externally controlled motivation.

The most important policy questions were that of student and instructor reward systems and the concept of decentralized control and increased responsibility and authority at lower levels within the organization. The initial or present state system of rewards was based on totally different criteria than that of the future state. In the present state, headquarters and support personnel lacked the commitment and ownership in the operation of the program. The future state scenario required the overall shouldering of responsibility in order for success to be realized.

In the next section we will clarify the differences that existed between the present and future states of the organization. The main thrust will be the identification of the transition state and describing the strategy utilized by Colonel Smith in the management of that critical period in the change effort.

B. MANAGEMENT OF CHANGE

In the previous section the situation was described and the development of a future and present state scenario was illustrated. The purpose of this section is to further illustrate the model by developing the transition state for the illustrative scenario and the strategy for its management.

1. The Transition State

Colonel Smith realized that proper planning and management of the transition state was critical to the success of his change effort. Recognizing the unique nature of this period, he devised a strategy for coping with the confusion of changes in individual roles, decision making and authority which would occur during the transition period. To assist him in planning and conceptualizing the content of the transition period, he developed the Change Effort Planning Chart depicted in Figure 3.3. This manner of organizing his thoughts allowed Colonel Smith to directly relate future state characteristics and their corresponding behavior in the present state. In the column headed Future State are listed those processes, behaviors or outcomes of the future which do not exist in the present in their desired form. In the corresponding position under the Present State heading are listed those conditions which deviate from desired state. In coordination with later activity plans the Transition State column can be filled in to provide a simple illustration of where we are; where we are going and how we are going to get there.

CHANGE EFFORT PLANNING CHART

Transition State from Jan FY80 to Apr FY81

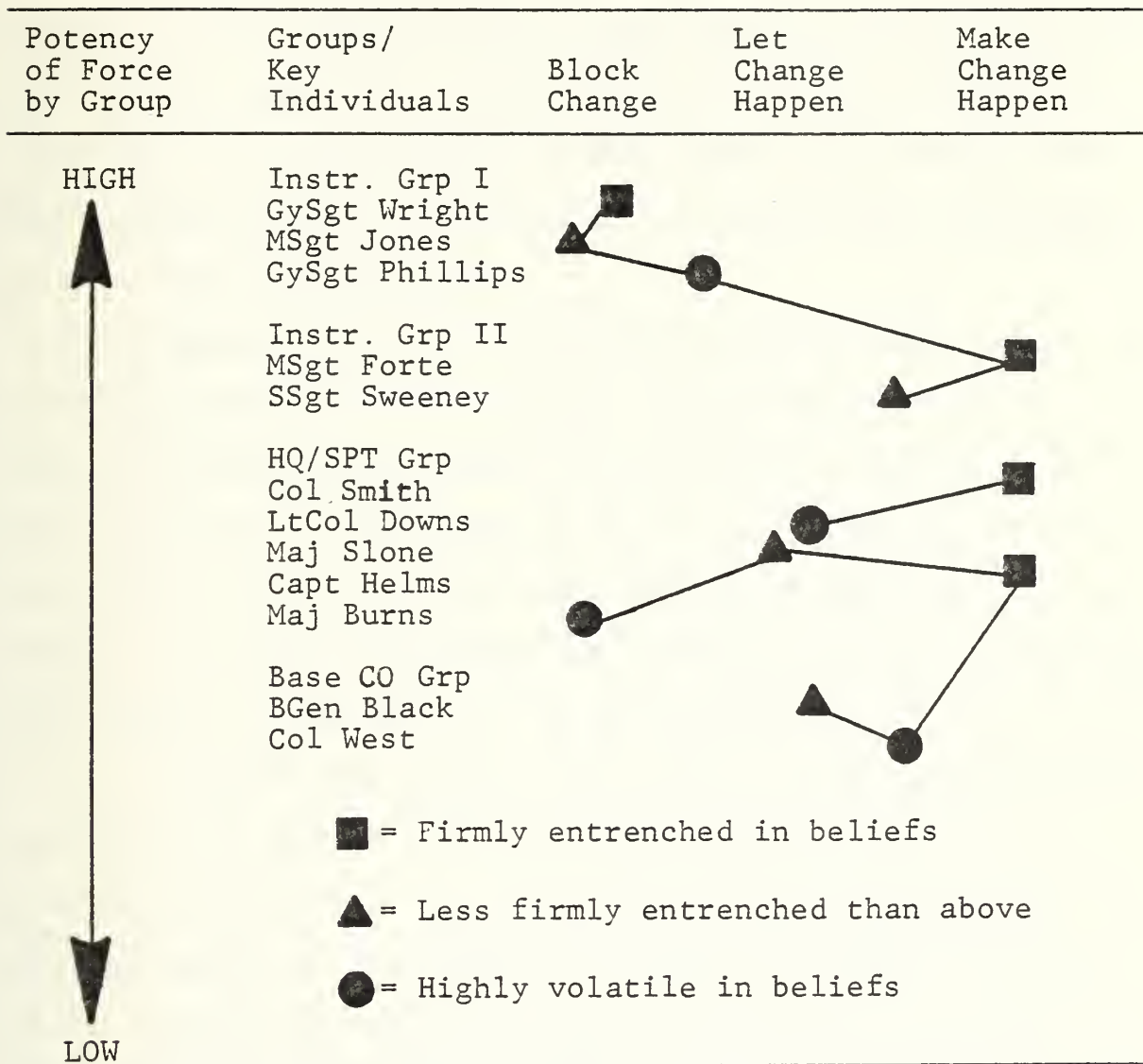
<u>Present State</u>	<u>Future State</u>
1. Satisfaction with status quo (platform instruction)	1. Multi-media computer based education system
2. Instructors as pawns of computer	2. Instructors as facilitators
3. Lack of criteria based instructor evaluation	3. Performance oriented instructor evaluation.
4. Externally controlled student motivation.	4. Internally controlled student motivation.
5. System not aware of differing abilities	5. System attuned to students needs.
6. Student reward system based solely on individual performance.	6. Student reward system based on achievement and assistance to fellow students.
7. Instructor reward system based on informal evaluation.	7. Instructor reward system based on student success.
8. Instructors feel recruiters are selecting/enlisting sub-par individuals.	8. Instructor belief in the capabilities of students.
9. Instructors do not possess the tools to be diagnosticians.	9. Instructor as diagnostician.
10. Headquarters/Support personnel not responsible for success or failure of the system.	10. Organization wide ownership in the system.
11. Centralized control/responsibility.	11. Decentralization of control and responsibility.

FIGURE 3.3

After identifying those elements that needed to change, Colonel Smith sought to determine which groups and individuals were necessary to a successful effort. He utilized the Socio-Political Force Analysis method discussed in Chapter II. In developing his chart (Figure 3.4), he selected those groups which possessed significant power and were identified in his analysis of the present state. The only individuals isolated within each group were those who possessed significant power within the group and influenced a sizeable constituency.

Figure 3.4

Socio-Political Force Analysis



With the assistance of MSgt Forte and Capt. Helms, Colonel Smith was able to identify the formal and informal relationships which existed between members of the identified groups. Colonel Smith believed that the instructors possessed the greatest power for insuring success. His rationale was based on their having direct contact with the students and the responsibility of integrating the educational approaches to meet the students needs.

Because of their responsibility in directing and providing support for the change, Colonel Smith believed that the headquarters/support group was also critical. He realized that he would have to rely on the members of this group for leadership in the implementation phase of the change. He had to feel somewhat confident in their commitment and ability to function as a coordinating force.

As mentioned earlier, the school command was not subordinate to the Base CO but he could effect the school's operation indirectly. In order for Colonel Smith to take full advantage of the benefits of computer based education (i.e., scheduling based on student readiness), he needed to have maximum control over student time and availability. If he could reduce or eliminate some of the required support to the Base CO, it would greatly enhance his program.

Individually, Colonel Smith was most concerned with the positions on the chart of MSgt Jones and GySgt Phillips. Though GySgt Wright possessed the greatest power, any attempt

to dislodge his highly stable position against the change would absorb an abnormal amount of energy. Both MSgt Jones and GySgt Phillips were less entrenched in their convictions and could possibly be influenced by MSgt Forte to at least let the change happen. Colonel Smith was also confident that MSgt Forte could at least ensure that SSgt Sweeney would maintain his present position.

Colonel Smith was confident that he and Capt. Helms could significantly increase the favorability within the headquarters/support group. If Major Burns failed to respond to his efforts, Colonel Smith felt no reluctance to transfer him out of the command. As aide to the previous Base CO, Capt. Helms had developed a good rapport with the Chief of Staff, Colonel West, and was helpful in assisting Colonel Smith's efforts to influence the Base CO to amend his personnel support policies.

2. The Activity/Process Plan

In developing a strategy based on an analysis of the forces affecting the implementation of the change and what needs changing, Colonel Smith was faced with choices about where to start. His initial choice was to establish a project committee composed of headquarters/support personnel and instructors. Their function was to ensure the integration of all facets of the change effort to include hardware, software, courseware and human resources. They were also responsible for the development and implementation of a pilot

course under the new system which Colonel Smith hoped would provide valuable information to further assist in clarifying the future needs of the organization.

Recognizing the need for an explicit plan specifying activities to be undertaken and critical incidents or events that must occur to get from here to there, Colonel Smith developed the necessary activity or process plan. The process plan provides the roadmap for the change effort and coordinates the development of activities. Figure 3.5 provides a chart-like display of the activity/process plan.

Figure 3.5

ACTIVITY/PROCESS PLAN CHART

Date	Critical Event	Prerequisite Activities
Jan 80	Complete organizational assessment	
Feb 80	Establish Project Committee	
Apr 80	Conduct organization-wide goal identification and action planning	<ol style="list-style-type: none"> 1. Workshop on changing capabilities (i.e., academic background) of today's youth. 2. Workshop on changing needs of the military. 3. Presentation on past and present concepts of computer assisted instruction. 4. Workshop on the concept of multi-media educational systems. 5. Workshop on the role of the instructor in CBE. <p>*Alternative Activity - Organizational confrontation meeting</p>
May 80	Commence development of CBE instructor training course	<ol style="list-style-type: none"> 1. Workshop on changing role of the student in CBE.
Jun 80	Initial Delivery of Hardware	
Sep 80	Conduct pilot CBE course	
Oct 80	Begin student screening and remedial training	
Nov 80	Update instructor training course	

Figure 3.5

ACTIVITY/PROCESS PLAN CHART (Cont'd)

Date	Critical Event	Prerequisite Activities
Nov 80	Institute new instructor evaluation criteria and student reward system	
Jan 81	Hardware delivery completed	
	Begin instructor training for CBE	1. Reassessment of instructor attitudes.
Feb 81	Software/courseware tests	
Mar 81	Commence change to computerized administrative procedures	1. Computer utilization and operation course for administrative personnel.
Apr 81	Commence first CBE class	

Colonel Smith's activity plan provided a temporal structure for the organization of the change effort. As stated previously, he completed the organizational assessment and selected the project committee in February 1980. Prior to conducting an organization-wide goal identification and action planning activity, he recognized the necessity to establish the need for change within the organization.² As commanding officer, he realized that the change could physically come about on his verbal direction alone, but he realized that the degree of change and effectiveness of the new system would be greatly enhanced if the organizational members shared the responsibility and desire for success. The prerequisite activities, prior to the conduct of the goal identification and action planning event in April 1980 were designed to increase the level of dissatisfaction with the present system, describe a clear desired state, and provide a practical first step toward the desired system. Evidence from the organizational assessment indicated the need for a better understanding of the needs of the military, changing student input, multi-media training systems, and the role of the instructor in computer based education (CBE).

By clarifying the situation, he believed that the members of the major groups could more easily and constructively enter into the goal identification and action planning process. Colonel Smith had identified this as a critical event because of the diverse range of opinion held by the

members of the organization concerning the proposed change effort. The organizational confrontation meeting was suggested as a backup to the previously discussed approaches.³ It is a method of quickly mobilizing the human resources of an organization in order to identify problems, establish action targets and solve problems.

The hardware, software, and courseware events served as key time indicators for the project and emphasized the equally critical nature of their status. A prerequisite for commencement of the instructor training course was the changing role of the student in CBE. This served to introduce the instructors to the changing student needs under the new system and the proposed changes to the student evaluation and reward system. The development of the new instructor training course was primarily designed to ensure that the instructor characteristics, previously stated in the future state description, would be achieved.

Extreme importance was placed on the success of the September 1980 pilot CBE course. A success would serve to sway some of those who were continuing to resist the change and important information could be gained for further clarifying the future state. Information from the course would also be used to update the instructor training course in November 1980.

The remaining critical events were in direct response to needs indicated in the organizational assessment. Perhaps the two most ticklish events during the entire transition period were the change to the instructor evaluations and assignment to the instructor training course. Many of the instructors continued to resist and resented having to go back to school to learn to teach. The sequencing of the student screening and remedial training and the change to student and instructor evaluations was designed to develop an internal need within the individual instructor to prepare himself for the changing demands of CBE. The prerequisite assessment of instructor attitudes served to provide summary data on the effects of the previous events. It was felt that this information would assist in student instructor assignments to the instructors' course. Predominantly positive participation was identified as critical to the success of the instructor course.

3. The Governance Plan

Having developed the activity/process plan, Colonel Smith then turned his attention to the decision of how to best manage the transition state. He had previously recognized the problem of operating two diverse systems at one time under the same structure. Though he desired to maintain his present organizational structure with the new system, he doubted its viability for CBE during its transition period. As emphasized in Chapter II, he needed to develop a management system which would create the least tension with the ongoing

system and the most opportunity to facilitate and develop the new system.

Colonel Smith believed that his project committee concept (hardware, software, courseware, and human resources) would provide the project management integration that he desired. This approach allowed him to take advantage of several structures previously mentioned. To ensure the proper integration of activities, Colonel Smith established himself as project coordinator. The appointment of individuals to the particular areas permitted him to have representation from major constituencies (i.e., instructors and headquarters/support). Perhaps the greatest advantage came in the assignment of particular individuals to the position. Captain Helms was assigned as head of the human resources area and was to be assisted by GySgt Phillips from the instructor group. Maj. Slone, from headquarters and MSgts Jones and Forte from the instructor group were assigned to supervise the development of the courseware. Installation of the hardware and development of the software were to be monitored by the systems acquisition officer, Captain Riley and Maj. Burns, respectively. In this way Colonel Smith was able to utilize the structure in such a way so as to assign those "natural" leaders who brought the critical constituencies in line with the change effort.

In general, Colonel Smith's approach could best be described as matrix-like in nature. The individuals assigned

to the senior billet in each area and their assistants would come from the present structural components of the organization. Their new duties would be full time for the duration of the transition period and they would have Colonel Smith as their immediate reporting senior. On completion of the change effort each individual would return to their original structural component and provide the expertise for the continuation and maintenance of the CBE program.

4. The Commitment Plan

A close analysis of the activity/process plan and the governance plan illustrates Colonel Smith's early awareness of the critical nature of organizational commitment to a totally effective change effort. Early development of the Socio-Political Force Analysis and a keen awareness of individual attitudes during the organizational assessment allowed Colonel Smith to utilize this information in the design and identification of:

- Critical events and prerequisite activities in the activity/process plan.
- Areas of concern in developing his transition management structure.
- Selection and assignment of individuals to particular areas in the transition management structure.

Specifically, Colonel Smith was most concerned with the commitment of his senior enlisted instructors and several members of his headquarters element. Reviewing his Socio-Political Force Analysis Chart, he identified the need to have

MSgt Jones let the change happen and if possible, get GySgt Phillips to make it happen. He also felt that a greater sense of headquarters cohesion could be attained if Majors Burns and Slone were more positive toward the change effort. Though GySgt Wright held a position of significant power within the instructor group, Colonel Smith felt that his effect could be minimized by reducing his allies.

To accomplish these goals, Colonel Smith addressed the dilemma from two approaches. On the one hand, he assigned individuals identified as resistant to the change to the project committee. In this way he could directly observe the behavior of Major Burns, Major Slone, MSgt Jones and GySgt Phillips. By putting them in positions of leadership within the project committee, their evaluations and rewards became directly tied to their efforts in making the change effort a success. Further, MSgt Jones and GySgt Phillips could directly effect the opinions of their respective contingencies.

Colonel Smith's second approach was in the development of prerequisite activities for the activity/process plan. He hoped that through the education process the problem could be clearly identified by the majority so that constructive plans could be developed for ensuring a successful change effort. The goal identification and action planning activity was a clear realization on Colonel Smith's part that the higher the correlation between individual and

organizational goals, the greater the chances for success. In this way individuals have a greater stake in the organization.

5. Monitoring and Evaluating the Change Effort

In order to increase the probability of success for the change effort, Colonel Smith realized the need for developing a sound evaluation plan. He felt by doing so he could more readily monitor the progress of the organization toward its ultimate future goal. Should the designed activities not prove successful, alternative measures could be taken on a more timely basis.

Colonel Smith felt that because of the long-term nature of the change and the distinct difference between the transition state and the future state that a two-part evaluation would be best. The purpose of the initial evaluation would be to assess attitudinal and behavioral progress toward the future state goals identified in the Change Effort Planning Chart. In turn, the purpose of the second evaluation plan would be to provide a long-term method of evaluating the permanence of the change effort and reevaluate the goals of the organization.

Colonel Smith assigned the responsibility of maintaining organizational climate data to the human resources section of the project committee. During the transition period he identified a need to know:

- If commitment to the program was increased by the prerequisite activities to the goal identification and action planning event;
- If the changing role of the student in CBE was understood prior to developing the instructor training course;
- The impact of the change in the instructor evaluation procedure and its potential effect on instructor training;
- The impact of the change in the instructor evaluation procedure and its potential effect on instructor training;
- The effect of the student screening and remedial training on student academic performance;
- If resistance to computer utilization for records keeping continues to exist and if so, what are the specific problems?

Utilization of the information was specifically designed for the project committee and where practical would be fed back to the organization through monthly organizational information exchange meetings.

Several methods were utilized to attain the needed data. In most cases the human resources personnel utilized personal interviews to gather data. Other information sources, such as student academic records, provided the needed data on the effects of the student screening and remedial training program. Numerous meetings and classes were monitored to ascertain behavioral changes through the evaluation of the quality and quantity of communications.

Colonel Smith's long-term evaluation plan made extensive use of his computer assets. In essence, he designed

his own management information system and controlled access by using passwords and user code numbers. The information requirements were submitted by structural department, screened for redundancy and actual usage frequency and implemented into the system. By accessing the computer, he and his subordinate managers were able to closely monitor:

- Changes in student performance;
- Changes in instructor performance;
- Changes in student input;
- Changes in the effectiveness of pre-course screening and remedial training;
- Changes in student attrition.

These trends revealed little in and of themselves, but would alert the organization to developing problems. Further investigation into the problem area would then provide the details of the situation so that corrective action could be taken.

C. SUMMARY

The objective of this chapter has been to provide a vehicle for demonstrating the application of the model described in Chapter II. In no way should this be interpreted as a cookbook solution to the problems facing commanders in managing complex educational system changes. As mentioned initially, the situation described was fictitious in nature and was intended only to illustrate and facilitate understanding. For this reason, the evaluation of the intervention activities

could not actually be performed. However, the activities described are in alignment with current theory and may serve as examples should similar situations arise in real life programs.

The final chapter will address the limitations imposed upon the illustration and recommendations which can be drawn from the text and propose applications of the model on a broader scale. Restricting the application of the model to the realm of program changes within educational systems would wrongly attribute a specialized nature to the concept.

IV. DISCUSSION AND RECOMMENDATIONS

This, the final chapter, is divided into two sections. In the first section, we will address the limitations placed on the model in Chapter III and further applications in future training programs. The second section provides insights into the general applicability of the model and recommends areas for additional research and development.

A. DISCUSSION

1. Limitations Imposed on the Model

In the thesis, and particularly in Chapter III, certain limitations were placed on the scope of the situation addressed by the model. The primary thrust toward addressing the human resources area should in no way prejudice the reader from regarding the model as applicable to the hardware, software, and courseware areas of the example. It is the writer's belief that approaching the other three areas, in the same detail, would have served only to unnecessarily lengthen the thesis content while not significantly enhancing the illustration of the model.

Had the areas of hardware, software, and courseware been addressed, the same detailed planning efforts outlined in Chapter II would have been applicable. Though the identification of the future and present states would have been

less difficult, the development and management of the transition period would have required the same detail exhibited in the human resources area. Colonel Smith would have needed to see to the development of the same transition management plans for each specific area.

The final transition management plan would have exhibited an intermeshing or coordination of the four separate area plans. In turn, the future system scenario would have provided a detailed description of the desired state characteristics to include:

- Hardware system organization, management, performance requirements, storage capability and medium, etc.;
- Software system management, language usage, program development, personnel capabilities, etc.;
- Courseware design, flexibility, modification capabilities, etc.;
- Human resources areas described in Chapter III.

To further illustrate, the activity/process plan outlined in Figure 3.5 would have been greatly expanded to include additional critical events and their prerequisite activities for each specific area. The hardware, software, and courseware critical events which were outlined in Figure 3.5 were designed to provide a sense of system integration only. Furthermore, this demonstrated expansion of the future state and activity/process plan would be carried through the governance and commitment plans and require a totally integrated evaluation plan.

2. Future Training System Applications

As noted in Chapter I, the environment in which we exist is changing at an increasingly rapid pace. At the same time, the complexity and technical base of the military is increasing with the acquisition and development of every new or improved weapon system, communications system, record keeping system, supply system and transportation system. It is not difficult to see that we are becoming "systems" intensive.

Any one of the previously mentioned areas is a candidate for application of the model. However, one should not identify the model's capabilities as solely appropriate to technical training system changes. For example, should we identify a need to change the method and content of our leadership training programs, the proposed model would prove to be a valuable planning tool. As long as leadership maintains its lofty position within the Marine Corps, any attempt to vary from present doctrine would require great detail in preparation.

The description of the future program would have to be as detailed as possible. A few of the critical questions which should be addressed are:

- What are the expected leadership styles or roles?
- What will be the performance requirements?
- What types of training will be appropriate at different command levels?

- What are the expected characteristics of the output from the program?

As stated previously in Chapter II, extreme care should also be taken in diagnosing the present condition or state. In order to begin planning for the transition from the present to the future one must have a clear understanding of the starting point. Of concern would be:

- What behaviors, policies, etc., existing in the present program must be changed in order for the change to be effective?
- What is the change readiness within those areas identified as necessary to the success of the change?
- What changes in attitudes are required?
- What changes in practices are required?

In the case of a changing leadership program, perhaps the critical elements of managing the transition from the present to the future would be the development of the commitment plan. Many of the activities in the activity/process plan and the designation of individuals to perform the governance of the change would be designed to establish and maintain commitment to the change effort. Role models would be critical to a change of this nature.

A situation of this type may dictate the de-emphasis of the governance plan with an increased dependency on the information provided by the monitoring and evaluation plan. You cannot order compliance with, and the practice of, particular leadership methods. For this reason, individual commitment

is necessary and evaluation of the levels of commitment and desired behaviors is critical. A change effort of this magnitude would have to be accomplished correctly the first time. Any gross errors due to inadequate planning would only discredit the program rather than the method of its implementation.

B. RECOMMENDATIONS

1. General Applicability of the Model

In general, the models application should not be restricted to the realm of training system changes. It's structure and elements are suitable for addressing a myriad of change topics, to include force structures, weapon system acquisitions and command structure modifications. Changes in manpower, technology and the availability of funds will, no doubt, have the same impact on these areas as implied for educational systems.

Though PERT and CPM have been traditionally used as planning aides for complex change efforts, they fall short in comparison with the transition model. Critical to the PERT and CPM method is the concept of network development. The network is a diagrammatic expression of the pattern of work. It consists of events (sometimes called milestones) and activities (sometimes called tasks). Activities represent the passage of time in accomplishing the goals while events represent one point in time. The longest activity path through the network is labeled the critical path and any change of activity time along this path will change the project duration time.

A comparison of PERT/CPM and the transition model may lead the reader to believe that the two concepts are alike. On the surface, the activity/process plan, found in the transition model, resembles the elements of the PERT chart or network. Closer scrutiny, however, reveals the contrary. PERT is primarily concerned with the questions:

- What must be done first?
- What must be done next?

Beyond these questions, the PERT/CPM method relies completely on the in-depth knowledge of the commander for guiding the change effort.

In comparison, the transition model utilizes the three state concept and identifies specific plans to assist the commander. Though the activity/process plan, like PERT/CPM, is temporal with specific critical events, the concept of commitment development and non-time based evaluation is unique. In addition, the PERT/CPM method does not address the detailed development of the present and future scenario or possible structures for managing the transition.

As an illustration, one needs only to address the Rapid Deployment Force concept recently authorized by the President. Within the next ten years, the Marine Corps will be required to provide three brigades to contribute to the readiness of the proposed force. The impact of such a requirement will have an enormous effect across a large cross section of the Marine Corps.

Though the brigade concept is not totally alien to the Marine Corps, it does imply structural and command relationships not presently exhibited in our traditional division system. Also, if present forces are to be relocated, support facilities may have to be developed or, at least, new support relations established. Because of enlistment and retention problems, we are becoming more aware of the needs of the family. Again, relocation would require considering the impact upon the individual and his dependents.

Combine the previously proposed information with our changing emphasis toward mechanized weapon system acquisition and one cannot help but realize the need for coordinated and detailed planning procedures. Not only would the transition model be valuable for the large scale planning needed for brigade development, but it would also be extremely useful in providing a guide for the detailed analysis of component unit transitions and weapon systems acquisition and implementation. Perhaps the model's greatest value can be found in its more or less universal applicability for managing complex change efforts across a varied sample of organizational structures and needs.

2. Continued Model Development

Present levels of knowledge make it impossible to develop change models which are capable on eliminating uncertainty. Though uncertainty may never be totally overcome, in-depth research and documentation will serve to enhance the

capabilities of contemporary methods. Through careful documentation and evaluation of change effort strategies, additional and/or more precise transition management plans may be identified and those presently in existence improved upon.

Detailed documentation of the model's utilization over a broad selection of change activities will provide information for future development and modification of the model. For example, the following areas have been suggested as suitable for the model's application.

- Technical training systems
- Non-technical training systems
- Weapon systems acquisitions
- Supply systems
- Transportation systems
- Personnel record systems
- Force structure
- Command structure

Perhaps the key to success in model development is the in-depth analysis of the change situation. In order to develop a more detailed guide for managing transitions, we must develop a better understanding of the phenomena exhibited by evolving organizations. To accomplish this, thorough data collection activities must be developed and implemented.

In conclusion, it must be said that the need for developing a detailed change model exists. Further research and development of this model and its comparison with other

models should be accomplished. As stated initially, we have the planning guidelines for tactical operations but lack detailed guidance for accomplishing administrative changes. How long can we afford to stumble along with our present short range, crisis management methods?

FOOTNOTES

Chapter I

¹U.S. Army Strategic Studies Institute (1978), pp. 61-78.

²Roscow (1979), pp. 1-9.

³Parker (1980), p. 3.

Chapter II

¹Beckhard and Harris (1977), pp. 25-26.

²Ibid, p. 28.

³Ibid, p. 37.

⁴De Luca (1979).

⁵Beckhard and Harris (1977), pp. 42-43.

⁶Harris (1979).

⁷Ibid, pp. 52-53

⁸Ibid, pp. 47-48.

⁹Ibid, pp. 54-57.

Chapter III

¹U.S. Army Strategic Studies Institute (1978), p. 65.

²Beckard (1969), pp. 35-40.

³Huse (1975), pp. 137-140.

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